

## REMARKS

The application has been carefully reviewed in light of the Office Action dated April 17, 2006. Claims 1-11 are pending. No new matter is believed to be added by this response.

### Rejection under 35 U.S.C. § 112

Claims 9 stands rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the enablement requirement. The Examiner states that, while Claim 9 requires cathode rotation, the specification does not sufficiently support structure therefore. Applicant submits that rotating cathodes are well known in the art and that one of ordinary skill would know the meaning of rotating cathode.

### Rejection under 35 U.S.C. § 103

Claims 1 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Szczyrkowski (U.S. Patent App. 2002/0157945 A1), in view of Mikata (U.S. Patent App. 2001/0012697 A1). The Examiner states that Mikata discloses an apparatus which has two chambers, each of which is connected to a gas feed and an exhaust. The Examiner further contends that it would have been obvious to one of ordinary skill in the art for Szczyrkowski to add plural gas source ports and vacuum ports, as taught by Mikata. However, this combination of apparatuses would not be operable. Szczyrkowski discloses a sputtering device with a cathode, forming a target in a cathode chamber, and a substrate to be coated by the material sputtered off the target in a substrate chamber. In the substrate chamber, a mixture of argon and oxygen is fed into the substrate chamber. In Szczyrkowski, argon acts as a target gas or process gas to establish plasma in front of the cathode. Plasma ions are accelerated toward the target and sputter off the target material. Oxygen works as a reactive gas, which reacts with the material sputtered off of the target to form an oxide layer on the substrate (TiO, for

example). However, the target surface also reacts with the reactive gas in an undesired manner, which reduces the capacity of the coating installation. This problem would be solved if “the cathode chamber as well as the substrate chamber each respectively exhibit a direct suction port and their own gas feed” for reactive gas and process gas, respectively. Mikata, as shown in Figs. 3 and 4, discloses a system in which a reactive gas is fed into a stand-by chamber 414. Then, a substrate 413 is introduced into this chamber and is laid on a cover 411 that has a recess, thereby enclosing the reactive gas in the recess between the substrate and the cover. The reactive chamber is then pressurized with an inert gas and the shutter 410 between the stand-by chamber and the reactive chamber is opened. The substrate is moved, together with the cover, into the reactive chamber where the substrate is heated, so that the reactive gas that is in the recess between the cover and the substrate is decomposed on the substrate. Since, during decomposition, the recess between the cover and the substrate is sealed, no inert gas reaches the substrate. Mikata, therefore, teaches to separate the reactive gas and inert gas from each other by a cover. This process would not work with Szczyrbowski because there must be a steady flow of particles sputtered off the target onto the substrate for the apparatus in Szczyrbowski to function. Thus, a modification of the cited references to include the elements of the present invention would prevent the respective Szczyrbowski and Mikata apparatus from being used as designed, which undermines an obviousness rejection. *See In re Fritch*, 972 F.2d 1260, 1265 n.12, 23 U.S.P.Q.2d 1780, 1783 n.12 (Fed. Cir. 1992) (“This court has previously found a proposed modification inappropriate for an obviousness inquiry when the modification rendered the prior art reference inoperable for its intended purpose.”) (citing *In re Gordon*, 733 F.2d 900, 902, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984)); *Schneider (Europe) AG v. Scimed Life Sys., Inc.*, 852 F. Supp. 813 (D. Minn. 1994) (“Where obviousness is based upon a modification of a reference that destroys the intended purpose or function disclosed in a reference, there is no motivation for engaging in the modification.”) (citing *In re Gordon*, 733 F.2d 900, 902, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984)).

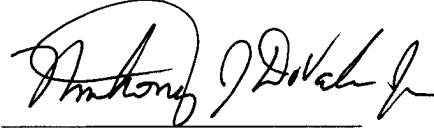
Further, the construction of the cited references in this manner requires hindsight reasoning, which the Federal Circuit has explicitly rejected. *See In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992) (“Here, the Examiner relied upon hindsight to arrive at the determination of obviousness. It is impermissible to use the claimed invention as

an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious."). Likewise, the claims that depend therefrom the respective independent Claim 1 would not be rendered obvious. *See In re Fine*, 5 U.S.P.Q.2d 1569, 1600 (Fed. Cir. 1988) ("Dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.").

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

It is believed that no fee is due with this submission. However, the Commissioner is hereby authorized to charge any fees which may be required to Deposit Account No. 14-0629. Respectfully submitted,

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